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ABSTRACT

This study attempts to evaluate the effects of special training for collegial supervision under the conditions of two types of organization development (OD) training within the multiunit school. The first type of OD intervention involved training for all the staff members of a multiunit school. The second was called group development (GD) and involved providing only the leadership group with the skills of OD. Different schools received different treatments. The primary purpose of this study was to determine the effects of training in collegial supervision in conjunction with consultation in OD and GD on a number of aspects of school life that included teacher satisfaction with working conditions and with colleagues, professional sharing, and communication adequacy. In addition, student attitudes toward specific subjects and classes were also analyzed. The research methodology is explained, including the hypotheses tested, the instruments used, and the method of analysis. The results of the study are summarized. (Author/MLF)

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Collegial Supervision: A Sub-Study of Organization Development in Multi-Unit Schools

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Responsibility for teacher evaluation and improvement traditionally has been relegated to the building principal. This role-pattern has several drawbacks such as the small amount of time principals can give to instructional supervision and the reticence of many teachers to be influenced by a superordinate. Frequently, principals who attempt to give instructional help in academic areas in which they are not perceived as competent encounter resistance and eventual alienation from their staff. A process by which colleagues help one another with instructional improvement, termed Collegial Supervision, is one possible alternative.

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*This study was done as part of the Research and Development Program on Strategies of Organizational Change of the Center for Educational Policy and Management. The co-authors performed different functions in relation to the study and this report. The lion's share of work was carried out by the first author. The ideas and data reported here first appeared in his dissertation (Nelson, 1971). The second author joined the R&D program after the project was over. He brought an unbiased point of view to a review of the data and the preparation of this Technical Report. The third author, director of the R&D program, supervised the dissertation, guided the preparation of this report, and edited the final manuscript.

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The change of one institutional structure such as superordinate supervision to quite a different institutional structure like collegial supervision involves basic changes in norms, roles, and the interpersonal relationships within the institution. One set of procedures -- that of consultation in organization development (OD) -- has been designed to help facilitate such changes. Essentially, they accomplish organizational change by helping members of an organization to explore their norms, roles, and communication patterns and by providing organizational members with the skills to develop structures that are more adaptive.

The context in which the introduction of collegial supervision occurs in this study is schools in which the OD process was being used to facilitate the change from a self-contained elementary school structure to a multiunit, differentiated staffed elementary school. In these multi-unit schools teachers work in units, with each teaching unit having responsibility for a large group of children. The heads of these units and the principals form a leadership group. Theoretically, this type of "link-pin structure" would lend itself ideally to the development of collegial supervision. This study attempts to evaluate the effects of special training for collegial supervision under the conditions of two types of OD training within the multi-unit school.

The first type of OD intervention involved training for all the staff members of a neophyte multi-unit school. The second was called Group Development (GD) and involved providing only the leadership group with the skills of OD. Different schools received different treatments. These two types of OD interventions have been discussed in detail elsewhere (see Schmuck and Miles, 1971; and Schmuck, Murray, Schwartz, Smith, and

Runkel, forthcoming).

The primary purpose of this study was to determine the effects of training in collegial supervision in conjunction with consultation in OD and GD on the following aspects of school life: (1) Teacher Satisfaction: (a) with working conditions, (b) as a professional teacher; and (c) with colleagues; (2) Professional Sharing: (a) innovativeness; and (b) exchange of ideas and techniques; (3) Communication Adequacy: (a) decision-making clarity, (b) norm for openness; and (4) Student attitudes toward specific subjects and classes.

The most general hypothesis was that these dependent variables would be enhanced by the introduction of collegial supervision. Furthermore, since the goals of both OD and GD consultation are to increase teacher satisfaction, the sharing of ideas and techniques, as well as openness in communication and decision-making, it was believed that the desired effects of both collegial supervision and OD or GD would be enhanced in schools where they are applied simultaneously. And, since OD focuses on the norms of the entire institution, it was projected that OD in conjunction with collegial supervision would produce more favorable effects than GD in conjunction with collegial supervision.

In short, the positive effects of an intervention on the aforementioned variables were expected to be least in a situation where GD was the only intervention, greater where OD was the only intervention, still greater where GD and collegial supervision were applied together, and greatest when OD and collegial supervision were applied together.

A final question to be considered was whether collegial supervision would have an indirect influence or spread of effect on other

units in schools where it was tried out. In this study, only the primary units were given direct training in collegial supervision. Perhaps an effect on the intermediate and upper units could be ascertained.

Training in Collegial Supervision

The training in collegial supervision provided each participant with classroom observational categories to gather objective data and skills and techniques to share the data with colleagues so that continued instructional improvement might occur. The training incorporated portions of Cogan's (1969) cycle for training intern teachers and the communication skill training of OD and Clinical Supervision (Schmuck, Runkel, Saturen, Martell, and Derr, 1972). It was designed to capitalize upon the collaborative efforts of the teachers in a unit. Essentially, there were three distinct phases in collegial supervision training:

(1) Early emphasis was placed upon informal data gathering techniques and their immediate application to classroom life. Audio-tapes, 16-mm film, and typescripts were used to acquaint the teachers with the methods of collecting data. Each teacher contracted to assist another member of his or her unit by collecting data on the participation and activity of children within the classroom or small group. The feedback procedures employed made use of communication skills to assure clarity (see Chapter 3, Schmuck, Runkel, Saturen, Martell, and Derr, 1972).

(2) Interaction patterns between students and teachers were the second area of observation. Materials for analyzing classroom processes taken from Fox, Luszki, and Schmuck (1966) were used as specific

examples of data collection tools. Also, during this phase of the training, a portion of Wallen's (1968) materials on interpersonal influence was incorporated into the instruction relating to feedback techniques. Observations made by teachers were shared with all members of the unit.

(3) The final phase of the instruction focused on the Cogan Cycles of supervision (1969). The four steps in the cycle were: pre-observation conference, classroom observation, analysis and strategy, and post-observation conference. Material on the Processes of Interpersonal Influence and the behaviorist concept of successive approximation were incorporated in the feedback procedures. Team observations by two or more members of the unit using several methods of data gathering for a single lesson were encouraged.

In essence, the demands made on a school attempting to integrate collegial supervision consisted of basic changes in traditional norms and roles. Specifically, these demands required new collaboration, helpfulness, direct and clear feedback, redistribution of responsibility, accountability, and authority, and a higher degree of receptivity and trust among teachers.

Research Design

This research was a subpart of a larger research and development project being carried out by CASEA's program on Strategies of Organizational Change.

Design of the CASEA Study

The design of the CASEA study involved eight elementary schools. Two of these schools, which had agreed to reorganize their structure to a multiunit format, contracted with CASEA to receive a 40-hour OD laboratory workshop during a week in August preceeding the 70-71 school year, and an additional 40 hours of OD training spread out over the school year.

Four of the eight schools, also agreeing to reorganize to a multiunit format, received GD training. Specifically, this entailed a 40 hour laboratory workshop in which a group of selected staff members and the principal were trained in OD skills. The trained group was then assisted by CASEA to train the remainder of the staff in communication skills, team development, and problem-solving. An additional forty hours of training was available to each GD group for use with the school staff during the school year.

The last two schools, selected from the original applicant schools, but who were not selected, agreed to continue their regular program and function as control schools.

Design of the Collegial Supervision Study

The design entailed two distinct but related intact group designs described by Campbell and Stanley (1963) as "Number 10, Nonequivalent Control Group Design."

The Schools. In this sub-study, School A refers to the OD experimental school and School B refers to the OD control school. The schools differed on many specific variables, but their basic instructional organization, that of the multiunit school, was the same. Among the

GD schools, School C refers to the experimental school and School D refers to the control school. These two schools were more alike than the OD schools, and they shared the same basic instructional organization of the multiunit school. The remaining two GD schools, designated Schools E and F, subsequently withdrew from the CASEA program at approximately mid-year. The predata collected from these schools in May is included in the base line data for this study; however, the post data will not be used for comparison purposes. The two control schools, designated Schools G and H, agreed to continue in their regular programs and to serve as controls for this project as well. Schools G and H both had some cooperative teaching, but the basic organizational pattern was the self-contained classroom. Differences did exist across all the schools. An important question is whether or not these differences were systematic and would, therefore, interact systematically with collegial supervision training. There is no reason to believe that systematic differences did exist.

Schematic of Research Design. During September, 1970, primary teachers in Schools A and C were asked to consider the proposed inservice class. On September 24, 1970, the first lesson was presented and the class continued until February 4, 1971.

The design included pre-and posttest data collection from both teachers and students. CASEA representatives administered the first set of questionnaires to teachers at a faculty meeting during the first two weeks of May, 1970. The post data collection took place at faculty meetings during the week of May 12-14, 1971.

A ten-item questionnaire was administered to all second grade students in the Eugene Schools Differentiated Staffing Project in May, 1970. This questionnaire was adopted for personal interviews by replacing the paper and pencil response with a student pointing response. Five faces ranging from a full smile to a full frown were used to represent five degrees of feeling about a particular item.

Prior to the end of the fall semester, a stratified, random sample of half the girls and half the boys in each first and second grade classroom were interviewed in experimental OD School A and experimental GD School C. A second interveiw schedule of the other half of boys and girls in Schools A and C were during the month of April, 1971. A random sample of half of the boys and half of the girls in each of the first and second-grade classes was also conducted during April,1971 in control Schools G and H.

Hypotheses About Teachers

H-1.1. Teachers in School A trained in OD and CS will express more Teacher Satisfaction than teachers in School B trained in OD only, specifically in terms of: (a) working conditions, (b) as a professional teacher; and (c) with colleagues.

H-1.2. Teachers in School A trained in OD and CS will express more Professional Sharing than teachers in School B trained in OD only, specifically in terms of: (a) innovativeness and (b) exchange of techniques and ideas.

H-1.3. Teachers in School A trained in OD and CS will express more Communication Adequacy than teachers in School B trained in OD only, specifically in terms of: (a) decision making clarity; and (b) norm for openness.

H-2.1. Teachers in School C trained in GD and CS will express more Teacher Satisfaction than teachers in School D trained in GD only, specifically in terms of: (a) with working conditions, (b) as a professional teacher; and (c) with colleagues.

H-2.2. Teachers in School C trained in GD and CS will express more Professional Sharing than teachers in School D trained in GD only, specifically in terms of: (a) innovativeness; and (b) exchange of techniques and ideas.

H-2.3. Teachers in School C trained in GD and CS will express more Communication Adequacy than teachers in School D trained in GD only, specifically in terms of: (a) decision making clarity; and (b) norm for openness.

H-3.1. Upper grade teachers in School A, where primary teachers were trained in OD and CS will express more Teacher Satisfaction than teachers in School B trained in OD only, specifically in terms of: (a) with working conditions, (b) as a professional teacher; and (c) with colleagues.

H-3.2. Upper grade teachers in School A, where primary teachers were trained in OD and CS will express more Professional Sharing than teachers in School B trained in OD only, specifically in terms of: (a) innovativeness; and (b) exchange of techniques and ideas.

H-3.3. Upper grade teachers in School A where primary teachers were trained in OD and CS will express more Communication Adequacy than teachers in School B trained in OD only, specifically in terms of: (a) decision-making clarity; and (b) norm for openness.

H-4.1. Upper grade teachers in School C where primary teachers were trained in GD and CS will express more Teacher Satisfaction than teachers in School D trained in GD only, specifically in terms of: (a) with working conditions, (b) as a professional teacher; and (c) with colleagues.

H-4.2. Upper grade teachers in School C where primary teachers were trained in GD and CS will express more Professional Sharing than teachers in School D trained in GD only, specifically in terms of: (a) innovativeness; and (b) exchange of techniques and ideas.

H-4.3. Upper grade teachers in School C where primary teachers were trained in GD and CS will express more Communication Adequacy than teachers in School D trained in GD only, specifically in terms of: (a) decision-making clarity, and (b) norm for openness.

Hypotheses About Students

HP. 1. Students in grade one or grade two in School A where teachers were trained in OD and CS will maintain a more favorable attitude toward teachers, classmates, and specific school subjects when compared to students in grade one or grade two in School C where teachers were trained in GD and CS.

HP. 2. Students in grade one or grade two in School A where teachers were trained in OD and CS will maintain a more favorable attitude toward teachers, classmates and specific school subjects when compared to to students in grade one or grade two in Schools G or H.

Teacher Instruments. The items selected to measure teacher satisfaction were taken from the wide variety of material in the CASEA project's measures (see Schmuck, Runkel, Saturen, Martell, and Derr, 1972). Teachers were asked to indicate their level of satisfaction in ten specific questions that were distributed between three clusters of Teacher Satisfaction: (1) satisfaction with working conditions, (2) satisfaction as a professional, and (3) satisfaction with colleagues.

Besides content validity, the five questions in the first cluster dealing with working conditions met the requirements for Herzberg, Mausner, and Snyderman's "Hygienes" in his two dimensional Motivation-Hygiene theory of job satisfaction. Basically, the Herzberg et al. theory states that job satisfaction and dissatisfaction are not merely two ends of the same continuum, but rather the products of separate

factors. The motivational factors contributing to satisfaction are achievement, recognition, the work itself, responsibility, and advancement. The 'hygiene' factors, whose absence creates dissatisfaction, were company policy and administration, supervision, interpersonal relations, working conditions, and salary. Subsequent research with teachers (Savage, 1967 and Johnson, 1967) corroborated the hypothesis that interpersonal relations significantly affect teacher satisfaction. In the professional teacher cluster, all of the questions dealt with teacher satisfaction on achievement, recognition, and work itself, all of which are motivational factors. In the satisfaction with colleagues cluster, the questions measure responsibility, recognition, and interpersonal relationships.

Analysis. The scales used for responses to the questions varied from a seven point scale to a four point scale. Some questions were reversed to avoid the bias of response-set. The total of the sample responses was used to determine the mean for each individual item, and a standard deviation was computed for each item. Negatively phrased items were treated to change the sign direction to a positive value.

To account for the different variances in the Likert-scales and for different numbers of responses, each response was converted to a Z score. Scores for cluster items were then combined Z scores for the cluster. Each cluster score was corrected to account for any unequal number of responses by including the item mean. Clusters were computed in two levels for each school. Primary teachers, grades one and two, were distinguished from upper teachers, grades three through six in six

of the schools. In schools B and C, the primary level consisted of grades one, two, and three.

Planned Comparisons (Hayes, 1963) was the statistical test used to judge significance. The differences of means between pre- and post-data were tested for significance at the .05 level of probability.

Analysis of Results

The results of this study are presented in six sections. Teacher data comprise the first five sections. In the sixth section, student interview data are reported. More specific details on these results can be found in Nelson (1971).

OD School Primary Teachers and Collegial Supervision

The seven hypotheses (H-1.1a, H-1.1b, H-1.1c, H-1.2a, H-1.2b, H-1.3a, and H-1.3b) in this part of the analysis produced one significant result and five were in the predicted direction. Hypothesis 1.3b predicted primary teachers trained in OD and Collegial Supervision, when compared to teachers trained in OD only, would express more communication adequacy with norms for openness. This hypothesis was supported at the .001 level of probability. Four of the remaining six hypotheses examined definitely were in the predicted direction. Two subsections of H-1.1, Teacher Satisfaction (b) as a Professional Teacher, and (c) with colleagues; H-1.3a Communication Adequacy in decision-making clarity were all in the hypothesized direction, but not significant. Two hypotheses, H-1.1a Teacher Satisfaction with working conditions and H-1.2b

Professional Sharing through exchange of ideas and were not in the hypothesized direction and were not significant.

GD School Primary Teachers and Collegial Supervision

Of the seven hypotheses tested here (H-2.1a, H-2.1b, H-2.1c, H-2.2a, H-2.2b, H-2.3a, and H-2.3b), two were clearly confirmed and five were in the predicted direction. Hypothesis 2.1a predicted that primary teachers trained in GD and Collegial Supervision when compared to primary teachers trained in GD only would express more Teacher Satisfaction with working conditions. This hypothesis was supported at the .025 level of probability. Hypothesis 2.3a predicted these same primary teachers would express more Communication Adequacy in decision-making clarity. A planned comparisons statistical analysis supported this hypothesis at the .001 level of probability. Three of the remaining five hypotheses examined were in the direction predicted. H-2.2b (Teacher Satisfaction as a professional teacher) and both hypotheses involving Professional Sharing, H-2.2a (of innovative practices), and H-2.2b (exchange of ideas and techniques) were all in the hypothesized direction, but not significant. Two hypotheses, H-2.1c (Teacher Satisfaction with colleagues) and H-2.3b (Communication Adequacy, norms for openness) were not in the hypothesized direction and were not significant.

OD School Upper Grade Teachers and Collegial Supervision

Of the seven hypotheses tested in this section (H-3.1a, H-3.1b,

H-3.1c, H-3.2a, H-3.2b, H-3.3a, and H-3.3b), four significant differences were found and six were in the predicted direction. Upper grade teachers reflected the effects of Collegial Supervision training in OD School A when compared statistically to OD School B. Hypothesis 3.1c (Teacher Satisfaction with colleagues) was significant at the .01 level. Hypothesis 3.2a (Professional Sharing in exchange of ideas and techniques) supported the hypothesis at the .01 level. Both Hypotheses 3.3a (Communication Adequacy in decision-making clarity) and 3.3b (norm for openness) were supported at the .001 level of probability. Data for Hypotheses 3.1b (Teacher Satisfaction as a professional teacher) and 3.2a (Professional Sharing of innovative practices) were in the direction of both hypotheses but at levels that were not quite statistically significant. When Hypothesis 3.1a (Teacher Satisfaction with working conditions) was tested it was found to be counter to the hypothesis, but not significant.

GD School Upper Grade Teachers and Collegial Supervision

Of the seven hypotheses here (H-4.1a, H-4.1b, H-4.1c, H-4.2a, H-4.2b, H-4.3a, and H-4.3b), three were significant but they ran counter to the predicted direction. They were: Hypothesis 4.1c (Teacher Satisfaction with colleagues), 4.3a (Communication Adequacy in decision-making clarity), and 4.3b (norms for openness). The remaining four hypotheses also ran opposite to prediction but were not significant.

Post Hoc Teacher Comparisons

Which combination OD and Collegial Supervision or GD and Collegial Supervision training produced more favorable impact upon teachers? This section compares the data taken from primary teachers in OD School A and GD School C. Each planned comparison F ratio is subjected to the more rigorous Scheffe test for significance. The seven hypotheses tested were:

> H-5.1 Teachers in School A trained in OD and CS will express more Teacher Satisfaction than teachers in School C trained in GD and CS, specifically in terms of: (a) with working conditions, (b) as a professional teacher, and (c) with colleagues.
>
> H-5.2 Teachers in School A trained in OD and CS will express more Professional Sharing than teachers in School C, trained in GD and CS, specifically in terms of: (a) innovativeness, and (b) exchange of techniques and ideas.
>
> H-5.3 Teachers in School A trained in OD and CS will express more Communication Adequacy than teachers in School C, trained in GD and CS, specifically in terms of: (a) decision-making clarity, and (b) norm for openness.

No significant difference was found in any of the hypotheses tested in this section. Three hypotheses, H-5.1c (Teacher Satisfaction with colleagues), H-5.2a (Professional Sharing in innovative practices), and H-5.3b (Communication Adequacy in norm for openness) were in the direction of supporting the hypothesis that Collegial Supervision would be more effective in the OD School; however, the F ratios were not significant. Data for the other hypotheses, also not significant, ran in the opposite direction to the predictions. Hypothesis H-5.1a produced the largest single F ratio, but was not significant. H-5.1b, H-5.2b, and H-5.3a produced F ratios counter to the hypothesis, however, none was significant.

Student Data

Student interview data were collected in OD School A and GD School C in the fall of 1970 and again in April, 1971. A sample of one-half of the boys and one-half of the girls in each first and second grade was interviewed in the fall; the second half of the boys and girls was interviewed in April, 1971. First and second grade students were interviewed in the two traditionally organized control schools in April. One-half of the boys and one-half of the girls were selected.

In HP.1 two significant differences were discovered in first grade student interview data when tested by planned comparison. School A supported Hypothesis HP.1 by an F ratio of 7.6419 in Social Studies. This was significant at the .01 level. School C opposed Hypothesis HP.1 in Reading with an F ratio of 5.7403 which is significant at the .025 level. Combination of first and second grade data shows School A tends to support the hypothesis in ten of the remaining eighteen variables, none of which was significant.

The variables of "my classmates" and Art were supported by School A first and second grade students while Math and Music were counter to the hypothesis at both grade levels in School C.

Concerning HP.2, students in the Control Schools G and H were consistently more favorable toward subjects, teachers, and classmates than students in School A. Math and Reading were found to be significantly different from School A in both grades. Of the thirteen remaining variables, School A tended to support the hypothesis in four areas.

Summary and Conclusions

There is modest empirical evidence that training in Collegial Supervision can improve the attitudes and professional interdependence of the primary teachers who receive it. In 10 of 14 comparisons here, primary teachers who received training in Collegial Supervision improved more than those who did not. Three of the 10 reached statistical significance. The favorable effects of Collegial Supervision were strongest on the communication adequacy of the primary teams.

The favorable effects of Collegial Supervision were even stronger when accompanied by training in OD for the entire elementary staff. In 11 of 14 comparisons, teachers in the OD school with Collegial Supervision improved more than teachers in OD schools without Collegial Supervision. Five of the 11 comparisons reached statistical significance. It seems appropriate to conclude that OD training can be strengthened when it is augmented by Collegial Supervision.

The results also indicate that the effects of Collegial Supervision can spread throughout staff, especially when training in Collegial Supervision is combined with OD. The upper grade teachers in the Collegial Supervision and OD schools improved in their satisfaction with colleagues and in their professional sharing of ideas and techniques. The upper grade teachers also improved significantly in their norms for openness and their decision-making clarity when compared with upper grade teachers who had also received OD training.

Results in the schools that received the GD training were in

striking contrast to those of the OD schools. Although the primary teachers in the GD school with Collegial Supervision improved more than those teachers in schools without Collegial Supervision, the spread of these favorable effects did not occur. Differences between the upper grade units in the GD school with Collegial Supervision and the GD school without Collegial Supervision ran counter to original expectations. All seven comparisons were in favor of the upper grade team that did not receive training in Collegial Supervision; three of those were statistically significant.

Two things could account for this unexpected outcome. First, in the GD school receiving Collegial Supervision, the increased competence and cohesiveness of the primary team resulting from the training seemed to challenge the long standing dominance of the upper grade team and to bring conflicts between the two teams out into the open. Second, changes in personnel in the upper grade team in the GD school with Collegial Supervision reduced its cohesiveness and power. The team leader and a very influential member were promoted out of the school. In contrast, in the other GD school, the upper grade team recruited two new members quite skilled in group dynamics.

Teacher training in Collegial Supervision had effects on the primary students. The most favorable result was in comparison between primary students in OD schools with Collegial Supervision and their counterparts in the GD schools with Collegial Supervision. The primary students in the OD school with Collegial Supervision became more favorable in their attitudes towards Social Studies, and maintained support-

ive attitudes toward their teacher and classmates. In attitudes toward peers, they lost less than their counterparts in the GD schools with Collegial Supervision. It is important to be cautious in interpreting these results since the research design did not allow a test of the effects of Collegial Supervision alone, nor did it allow a comparison with student data from the OD school not receiving training in Collegial Supervision.

The results of the comparison of primary students in OD schools with Collegial Supervision with their counterparts in the control schools were in significant contrast to those expected. First grade students in the control schools were significantly more favorable toward Math, Reading, and Physical Education. First graders at the OD school with Collegial Supervision became more negative toward Reading and Physical Education, but maintained favorable attitudes in Math. Second graders in control schools were more favorable toward Math, Reading, and going to school. Second graders in the OD school with Collegial Supervision became somewhat more negative in attitudes toward Reading and going to school, although they became slightly more favorable toward their peers.

These results may be attributed to the absence of pre-test data in the control schools. Without pre-test figures for the control schools, we do not know whether they started at a higher level than the experimental school. It is possible, of course, that the negative trends in the OD-CS school actually did take place. They may have arose out of the confusion and frustration experienced in a very rapidly changing school. Moreover, the primary teachers in the OD-CS school clearly were

putting significant time and energy into both the OD training and the CS training and therefore may have been underemphasizing their teaching. Both the confusion of change and the overload of two types of training would, of course, lessen as the innovative program achieved stability.

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